

WISSENSCHAFTLICHE KURZMITTEILUNG

**Unusual record of the Spotted hyena (*Crocuta crocuta*)
in Rio Muni, Equatorial Guinea (Central Africa)**

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*Receipt of Ms. 13.3. 1992
Acceptance of Ms. 23.6. 1992*

The spotted hyena (*Crocuta crocuta* Erxleben, 1777) has a subSaharan distribution, spreading out over the savannah of Guinea and Sudan, showing preference for flat, open grassland areas, and avoiding the closed forest areas of the Congo basin (KRUUK 1972; ROSEVEAR 1974; KINGDON 1977).

On the night of September 27 to 28, 1991, a strange specimen, even for local people, was killed by an automobile near Ndumu village (Nsork) on the south-eastern side of Rio Muni, Equatorial Guinea (1°27' N, 11°10' E). The animal, spotted and dog-like, was photographed before being dissected. The photographs and some recovered skeletal remains (tympanic bulla, left mandible together with its dentition, upper premolars, phalanxes and cervical vertebrae), were compared with the available material deposited in the collection of the Estación Biológica de Doñana, (Sevilla), which allowed us to identify the specimen as a spotted hyena (*Crocuta crocuta*) beyond any doubt. It has not been possible to determine its sex from the photographs because sexual dimorphism is very slight in this species and genitalia of both sexes appear very similar externally.

According to the third lower premolar wear, the specimen was a young adult, being included into KRUUK's age class III (between 3 and 6 years old) (KRUUK 1972). This agrees with the spot pattern of the skin, clearly defined all over the body. By counting the incremental lines in cementum of the decalcified and stained medium incisor, an age of seven years could be established for the individual, in accordance with the first estimation based on teeth wear, according to VAN JAARSVELD et al. (1987).

The importance of this record lies in the fact that the spotted hyena killed in Equatorial Guinea was in a closed wet lowland forest, in the middle of the Congo basin forest block. The existence of a stable population of spotted hyena in Equatorial Guinea can be rejected because of the long distance from its known distribution area and because it would have been detected by us over a period of more than 5 years, living in this small country (26,000 km²).

It seems more plausible that the record is related to an individual dispersal movement away from a distant population. Regarding the mobility of the spotted hyena, important displacements have been reported by KRUUK (1972) in Serengeti Park (Tanzania), related to the seasonal migrations of the large or medium-sized ungulates which they prey upon. In the Kalahari desert (Botswana), the spotted hyena wanders as far as 80 km a day (ELOFF 1964). Occasionally, the spotted hyena occurs in gallery forests not far from grass-woodlands, following tracks or roads. This could be the explanation of a possible record in Ibadan, Nigeria, on the western limit of the equatorial forest block (ROSEVEAR 1974). In these western populations, it is not unusual to see lone individuals (HAPPOLD 1987), a

behavior possibly related to the diet and the distribution of food supply (KRUUK 1972; MILLS 1990).

The nearest appropriate savannah vegetation where the spotted hyena killed in Equatorial Guinea may have originated is located either in Cameroon or Gabon.

In fact, the nearest stable populations of *Crocuta crocuta* occur in Cameroon in Benoué and Boubandjidda Reserves (RONNEFELD 1969), but the species has not been seen south of 8° N. In Gabon, MALBRANT and MACLATCHY (1949) stated the farthest extension of the species to the north was N'Dende (4° S), at the southern boundary with the Republic of Congo. SMITHERS (1983) also reported its occurrence in the southern corner of the country, but apparently the spotted hyena has been exterminated from the savannah around Franceville. From either of these two possible points of origin, this spotted hyena specimen would have been faced with almost insurmountable hydrographic barriers (Sanaga, Ntem, Uoro, Ivindo, Ogooué rivers) on its way to Equatorial Guinea, more than 700 km distant in a straight line.

The present record of a spotted hyena in Equatorial Guinea, although exceptional, may not be the first. The existence of a specific name (Ocam-niat) in the Fang vernacular language, its presence in several popular tales and the different descriptions recorded among villagers by BASILIO (1962) as well as by ourselves, support this idea; its presence has also been mentioned by hunters in several localities in the Gabon forest. These displacements could be seen as evidence for deforestation or forest degradation on the edges of the Congo forest.

Acknowledgements

We thank Mr. URCOLA and R. DELGADO for their assistance in field work, C. IBAÑEZ, M. DELIBES, C. KELLER, J. NEGRO and H. CASWELL for their helpful comments to the first draft of this manuscript. S. ZAPATA kindly made teeth preparations and counted the incremental dental lines. STEPHEN GARTLAN, WWF Representative for Cameroon, ALLARD BLOM, WWF Advisor, and some specialists gave us invaluable information. The work has partially been supported by the Spanish Instituto de Cooperación para el Desarrollo.

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